BENWELL AND FENHAM URBAN DISTRICT COUNCIL.

ANNUAL REPORT

OF THE

Medical Officer of Health

FOR THE

YEAR ENDING 31st DECEMBER, 1898.

Newcastle-on-Tyne:
PRINTED BY CAIL & SONS, 29 AND 31, QUAYSIDE.

1899.

TO THE CHAIRMAN (W. Bramble, Esq.) AND MEMBERS

OF THE

BENWELL AND FENHAM URBAN DISTRICT COUNCIL.

MEDICAL OFFICER'S ANNUAL REPORT.

Gentlemen,

The expiration of 1898 renders it incumbent on me to compile a medical report for that year. During the year the condition of the district as to buildings and population has been progressive. The estimated population is 13,000, an increase of a thousand. One hundred and thirty-five houses have been erected during the year; one hundred and fifty-five plans for new houses and alterations have been passed, and four estate plans, laid out for building purposes, have been submitted (Delaval, Benwell Dene, New Benwell and Fenham). The sewering of New Benwell and Delaval estates is being pursued rapidly, and under the close supervision of the Council's officials. An extensive sewerage scheme has been prepared for Fenham, which, when completed, will drain the whole of the northern and western portions of the district.

In the matter of house accommodation, it is interesting to notice the gradual improvement. Artisans are now living in houses such as their progenitors could never have dreamed of. The old form of tenement is rapidly disappearing, to be replaced by commodious flats, whose sanitary condition is beyond complaint.

Abattiors.—The Council have been considering the advisability of erecting abattoirs (public slaughter houses). A site has been purchased for the purpose. It is proposed to erect as many as will meet the requirements of the district; the butchers are *now* anxious to avail themselves of the advantages.

Co-operative Store.—A large and imposing block of buildings has been erected at New Benwell by the Co-operative Society. It is substantially erected, and evidences the growing importance of your district.

Public Park.—The Authority, by the munificence of Mr. Hodgkin, has been fortunate enough to secure the gift of five-and-a-half acres

of land for the purpose of a public park. Its position eminently fits it for such a purpose. I have no doubt when laid out by the Council it will form a charming and admirable retreat, securing for the locality an open space devoted to the enjoyment and pleasure of the inhabitants, and be a playground for children of a most invaluable character.

Cemetery.—Owing to the vacant spaces in the present burial ground, which is attached to the church, being now limited, it has been determined, under the Public Health Interment Acts, "that the Council should now make itself responsible for a cemetery." The discussion is now in an advanced stage, and I hear it will not be long before a complete scheme for that purpose is formulated.

Small Pox.—During the year no case of small pox has been notified, although cases have occurred in adjacent authorities. This, for the district, has been extremely fortunate, as without an infectious hospital no means of isolation would have been available.

The alteration of the law as to vaccination renders it probable that the number, sufficiently numerous already, of defaulters will be much increased.

Scientists look with alarm at the probable consequences, vaccination being proved over and over again to be eminently protective. It is extremely injudicious to alter the law. Anyone who remembers the scarred faces, blindness, and other disorders so often following in the wake of small pox, must tremble at the consequences of an outbreak of this loathsome disease.

Infectious Hospital.—Great difficulty has been experienced in securing a site for an infectious hospital. Residents naturally object to the proximity of such an institution. The latest scheme is to erect one on Benwell Hills. I am afraid, however, that a neighbouring reservoir of the Newcastle and Gateshead Water Co. will be a bar to the project.

BIRTHS.

During the year, 545 births (273 males and 272 females) were registered, equal to a rate of 41·9 per 1,000 per annum.

1898	...	...	41·9
1897	...	...	48·4
1896	...	...	40
1895	...	...	39
1894	...	...	39·7
1893	...	...	39·9

The per centage of deaths under one year, numbered in proportion to the recorded births, is :—

1898	21·4
1897	17·1
1896	15·2
1895	19·7
1894	8·56
1893	17·2

Births—Monthly Returns—

January	52
February	39
March	54
April	48
May	46
June	42
July	28
August	52
September	57
October	49
November	42
December	42
	545

DEATHS.

During the year, 269 deaths were registered from all causes and at all ages.

1898	269
1897	201
1896	173
1895	210
1894	130
1893	215

The Mortality—

1898	20·6
1897	16·7
1896	16·4
1895	20
1894	13
1893	21·5

Deaths—Monthly Returns—

January	12
February	11
March	15
April	28
May	21
June	21
July	30
August	36
September	50
October	30
November	17
December	8
	269

In the compendium of deaths, the monthly records shew a serious and remarkable fatality in July, August, September and October. These months were favoured by phenomenally hot weather, zymotic disease not being prevalent, but an excessive infantile mortality prevailed. Vigilant endeavour, by house to house visitation and advice as to rearing infants, and special cleansing of ashpits, &c., met with no success. Its causes, except the high temperatures, could not be discovered. Adjacent authorities shared in our experience. high temperatures evidently have a noxious influence in raising the temperature of the soil and possibly increasing the activity of noisome germs, which infest the air and contaminate the food of infants, whose physical ability little enables them to resist any unwholesome condition. On the return of moderate weather, the fatal frequency of infantile ailments disappeared.

Deaths—Localities—

	1898.	1897.	1896.	1895.	1894.
South Benwell	103 ...	50 ...	51 ...	72 ...	41
New Benwell	72 ...	65 ...	41 ...	37 ...	34
Priestman's Cottages and Handyside's Buildings	8 ...	13 ...	7 ...	9 ...	5
Delaval	13 ...	17 ...	16 ...	20 ...	8
Benwell and Denton... ...	16 ...	13 ...	16 ...	18 ...	10
Fenham	6 ...	0 ...	1 ...	1 ...	1
River Tyne	1 ...	1 ...	3 ...	3 ...	0
Scotswood	50 ...	42 ...	35 ...	37 ...	30

Deaths—Ages—

	Under 1 year.	1 to 5.	5 to 15.	15 to 25.	25 to 40.	40 to 60.	60 and above.
1898	117	40	14	11	26	24	36
1897	83	36	12	6	15	20	29
1896	65	28	10	11	12	23	24
1895	81	39	8	13	8	29	32
1894	34	19	11	8	12	17	29

Infantile Deaths.—117 (equal to 43·4 per cent. of the year's mortality) were of children under one year of age.

1898	43·4
1897	41·3
1896	37·5
1895	38·5
1894	26·1

Causes—

	1898.	1897.	1896.	1895.	1894.
Premature Birth and Debility	23	27	20	15	9
Bronchitis and Pneumonia	25	10	12	17	4
Convulsions	14	9	1	10	10
Whooping Cough	2	2	5	1	0
Meningitis	3	2	2	2	0
Marasmus	5	8	3	6	1
Measles	0	2	0	0	0
Heart Disease	0	1	1	0	0
Diarrhœa	15	4	4	4	1
Intestinal Catarrh & Gastro-Enteritis	28	13	9	20	4
Syphilis	1	1	0	2	1
Spina Bifida	0	2	2	4	0
Accident	0	0	1	0	0
Scarlet Fever	1	1	0	0	0

Of these infantile deaths, Disorders of the Respiratory System account for 21·3 per cent.

1898	21·3
1897	12
1896	18·4
1895	20
1894	11·7

Disorders of the Digestive System for 41 per cent.

1898	...	...	41
1897	...	...	36
1896	...	...	32·3
1895	...	...	36·2
1894	...	...	20·5

Premature Birth and Congenital Debility for 19·7 per cent.

1898	...	...	19·7
1897	...	...	32·5
1896	...	...	33·8
1895	...	...	18·7
1894	...	...	26·4

Nervous Disorders and Dentition for 14·5 per cent.

1898	...	...	14·5
1897	...	...	13·2
1896	...	...	4·6
1895	...	...	14·8
1894	...	...	29·4

Zymotic Disease for 2·6 per cent.

1898	...	...	2·6
1897	...	...	6
1896	...	...	7
1895	...	...	1·2
1894	...	...	29·4

Disorders of the Digestive System are most fatal to children. Previous records shew that this is no new experience. The record for September indicates to what extent this is really the case. Of 30 infantile deaths, 25 were certified to be from diarrhœa, gastro-enteritis, gastric catarrh and stomatites. A better acquaintance with the laws of health, as far as it concerns domestic hygiene, would lessen these evils. Parents are careless as to the food they give to infants. On an enquiry as to the food given to these children, it was found that 25 were bottle-fed and mainly on condensed milk. Failing the natural sustenance of the breast, diluted boiled milk, slightly sweetened with sugar of milk or a modicum of Farrehild's Peptogenic Food, affords the best results.

GENERAL DEATH RATE.

Causes. — Disorders of the Respiratory System caused 39 deaths, 14·5 per cent. of the mortality.

1898	...	...	14·5
1897	...	...	11·4
1896	...	...	14·4
1895	...	...	16·2
1894	...	...	17·6

Phthisis caused 26 deaths, 9·7 per cent. of the mortality.

This disease is a form of tuberculosis and is infectious. The disease arises from the inhalation of a germ which thrives in a congenial soil. Depressed health produces a condition which renders persons liable to the disease. The spulum or expectoration is the means whereby the infection is carried. Tubercle attacks the lungs, the joints, the brain, the bowels and other organs. 65,000 deaths were caused by tubercle in England and Wales in one year, and this after a 50 per cent. reduction in fifty years. The single exception is that *Tabes Mesenterica* (a disease of the bowels in children traceable to tubercle conveyed by milk) has increased. Consumption is a communicable disorder, communicated from person to person and from animal to man, and in no other way; for this reason it is a subject of interest to Health Authorities.

Measures for its prevention will have to be adopted. There are many proposals. We are in a position, however, at least, to disinfect infected houses, and by the provision of public abattoirs to secure that carcases are inspected.

Phthisis, with all the other forms of tubercle disease, is the work of a microbe. This living organism is present in the diseased lungs, intestines, meat and bones. The principal way in which it is conveyed is the expectoration of the sick; another way in which the bacilli is disseminated is in milk and meat. Cows are subject to tuberculosis.

If we could secure the destruction of the sputa from tuberculous persons, and secure a supply of milk and meat free from bacilli, all the diseases due to tuberculosis would disappear.

With these facts before us, it would be a prudent thing to disinfect rooms in which consumptive patients have died, when notification of the death is made.

Although it may be impracticable to stamp out tuberculosis in cattle by the slaughter of all diseased animals, when public abattoirs are provided their carcases can be inspected and the consumption of diseased meat prevented. The public also has a right to a milk supply free from tubercle bacilli; this can be attained by steriliza-

tion or boiling. No doubt by these means a much diminished fatality from tubercular diseases would follow.

The Bacteriological Investigation of Disease.—Much assistance in the diagnosis of typhoid, diphtheria, and tuberculous disease can be afforded by bacteriological investigation.

The College of Medicine, through Professor Murray, has undertaken, for a fee of 2/6 from Health Authorities and 5/- from practitioners, to apply Widal's test for typhoid, and to examine for bacilli the sputum of suspected phthisical persons, and the membrane in diphtheritic cases.

Some Health Authorities have already afforded means for investigating such cases, and it will be a question at some future time whether medical attendants of the sick in your district should not have a like privilege.

Heart Disease caused 25 deaths, 9·2 per cent.

1898	9·2
1897	6·4
1896	8
1895	8

Deaths over 60 Years.—35 died over 60 years of age, 13 per cent.

1898	13
1897	14·4
1896	12·7
1895	15·2

Accidents caused 4 deaths.

Zymotic Deaths—

	1898.	1897.	1896.	1895.	1894.
Measles	4	11	2	0	6
Whooping Cough...	8	1	8	1	2
Diphtheria	1	0	2	1	0
Puerperal Fever ...	0	0	1	2	0
Typhoid	1	2	1	0	2
Scarlet Fever ...	4	1	1	2	5

These zymotic diseases are responsible for 6·7 per cent. of the mortality.

1898	6·7
1897	7·4
1896	8·6
1895	6·6
1894	11·5

And are equal to a zymotic rate of 1·5 per 1,000 per annum.

1898	1·5
1897	1·4
1896	1·4
1895	1·3
1894	1·5

Zymotic Deaths—Localities—

	1898.	1897.	1896.	1895.	1894.
South Benwell...	5	3	4	6	6
New Benwell	6	3	3	4	8
Priestman's Cottages and Handyside's Buildings	1	1	2	2	1
Scotswood	3	4	3	1	3
Benwell and Denton	1	1	1	0	1
Delaval	2	3	2	1	1

COMPULSORY NOTIFICATION OF INFECTIOUS DISEASE HAS BEEN MADE AS—

Scarlet Fever (49)—

January		4
February		1
July ...		2
August		16
September		11
October		4
November		7
December		4—49

Scarlet Fever—Localities—

New Benwell ..	...	11
Scotswood		30
Benwell		5
Delaval		1
South Benwell	...	2—49

Scarlet Fever.—From February to July no notification of this disease was made. A single case was reported in July at Scotswood, followed by 29 others. In New Benwell the disease was introduced into the district from a Board School in the city. There was a sequence of ten cases all from the same school.

In January, a death at the age of 60 was registered from this cause.

Typhoid (4)—

January	...	...	1
February	...	...	1
March...	...	...	1
September	...	...	1—4

Typhoid—Localities—

New Benwell	...	...	2
Scotswood	...	...	2—4

Typhoid.—One of the New Benwell cases was in a child, the other in an adult, whose house was in too close proximity to an ash-pit. In September, at Providence Terrace, Scotswood, a case was reported. The patient, a dairyman, kept his cans and milk in the house. Immediately on the case being notified, all milk and utensils were removed, and a dairy at some distance provided. No workers in the dairy were allowed to nurse the sick, or live in or come near the house. A vigilant supervision of the case was effected by your officers, and no spread resulted.

Diphtheria (2)—

June	...	...	2

Diphtheria—Locality—

South Benwell	...	2

These cases, although occurring in the same month and in the same street, were entirely disassociated. The houses were at some distance from each other. One child took ill on returning from school, and died before the notification was received. The other resulted from the ineffectual ventilation of the house drain; this was promptly remedied, and the child recovered.

Erysipilas (18)—

Benwell	...	...	1
Delaval	...	...	3
South Benwell	...	...	8
New Benwell	...	...	1
Scotswood ...	...	...	3
Handyside's Buildings		...	2—18

No very useful purpose is served by these notifications, though they enable the Authority, by its officers, to examine and remedy any sanitary deficiencies.

Measles.—Up to February 11th, forty cases were notified; compulsory notification was then abandoned. After a three years'

trial it was found to exercise no appreciable suppressing influence on the disease. In an epidemic, reporting every case, sometimes four or five in one house, did little good. The only measure likely to succeed is to seize on the first cases and isolate them. School infection is the means whereby the spread of the disease is effected. It would be a good rule when absences from school from measles exceed a certain per centage to close them. Unfortunately, the infectability of a case exists before the eruption evidences itself, and as the incubation extends from 11 to 13 days, much damage results. It can be readily understood, therefore, that the reasons advanced for abandoning the notification of measles (which, I believe, we were nearly the first to contest for), were accepted by the Central Authority in London, who only for sufficient and convincing causes would have endorsed our action.

GENERAL WORK.

A house to house visitation has been made of the whole district, and a daily inspection is made by the Inspector of some portion of it.

During the year special attention has been given to the testing and connections of house drains, and when the water test was first applied, over ninety per cent. of the drains failed to stand it. No drain is passed until it stands this test.

A Disinfector is not yet provided.

Schools.—The schools in the district are visited regularly; they are kept very clean, more especially that in South Benwell.

Owing to the rapid growth of the district and the insufficiency of the accommodation, another school is to be erected on the Rendel Football Field.

Cow-sheds and Dairies.—There are eight cow-sheds in the district, containing 180 cows. A monthly examination of these premises is made; the cows have been healthy, and the milk of good quality. Many shops purvey milk; they will eventually be strictly supervised and registered.

Slaughter Houses.—*Vide* abattoirs.

Trade has been brisk during the year. An important industry, Messrs. Edison & Swan's electrical works, is now in full swing.

At the west end of the district, Armstrong, Whitworth are erecting large works, which will further increase the rateable value of the district.

SANITARY WORK.

	Found.	Abated.	In hand.
Choked and defective drains	114	110	4
Do. do. gullies	153	153	0
Defective waste pipes	33	30	3
Do. and foul water closets	41	39	2
Foul privies	47	47	0
Defective privies	15	14	1
Foul ashpits	118	118	0
Defective ashpits	17	16	1
Do. hatches	149	140	9
Soakage from ashpits	83	83	0
Defective yard paving...	64	55	9
Foul yards	110	110	0
No water	4	4	0
Accumulation of filth	3	3	0
Passages to limewash...	56	52	4
Cases of over-crowding	4	4	0
Dangerous walls	5	5	0
Number of houses disinfected		195	
Visits to infected houses		603	
Disinfectants supplied		158	
Occupiers, agents and owners interviewed ...		755	
Informal notices served		410	
Formal do.		68	
Notices complied with		437	

REFUSE REMOVAL.

From monthly ashpits	2,704
,, weekly ,, ...	3,744
,, scuttles daily	2,280
Total	8,728

Of these—3,274 loads have been sent to sea.
5,454 ,, ,, used for agricultural purposes.

I am,
Yours obediently,
N. HARDCASTLE,
Medical Officer of Health.

Newcastle-on-Tyne,
January 13th, 1899.

(A) TABLE OF DEATHS during the Year 1898, in the Urban Sanitary District of BENWELL AND FENHAM, classified according to DISEASES, AGES, and LOCALITIES.

NAMES of LOCALITIES adopted for the purpose of these Statistics; public institutions being shown as separate localities. (*Columns for Population and Births are in Table B.*)	MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.							MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN UNDER FIVE YEARS OF AGE.																						
												FEVERS.																		
	At all Ages.	Under 1 Year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	Whooping Cough.	Diarrhœa and Dysentery.	Rheumatic Fever.	Ague.	Phthisis.	Bronchitis, Pneumonia, and Pleurisy.	Heart Disease.	Injuries.	All other Diseases.	TOTAL.
(*a*)	(*b*)	(*c*)	(*d*)	(*e*)	(*f*)	(*g*)	(*h*)	(*i*)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
BENWELL AND FENHAM	268	117	40	14	11	56	30	Under 5	0	2	0	0	0	0	0	0	0	0	1	4	8	20	0	0	7	28	0	0	89	159
								5 upwds	0	2	1	0	0	1	0	0	0	0	0	0	0	0	1	0	19	11	25	4	45	169
	0	0	0	0	0	0	0	Under 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
								5 upwds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	Under 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
								5 upwds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	268	117	40	14	11	56	30	Under 5	0	2	0	0	0	0	0	0	0	0	1	4	8	20	0	0	7	28	0	0	89	159
								5 upwds	0	2	1	0	0	1	0	0	0	0	0	0	0	0	1	0	19	11	25	4	45	169

The subjoined numbers have also to be taken into account in judging of the above records of mortality.

Deaths occurring outside the district among persons belonging thereto.....	0	0	0	0	0	0	0	Under 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
								5 upwds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Deaths occurring within the district among persons not belonging thereto	0	0	0	0	0	0	0	Under 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
								5 upwds	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Area and Population of the District to which this Return relates :—

Area in Acres 1,367

Population (1891) 10,501

Death Rates { General: 20·6 per 1,000 population, estimated to middle of 1896.
Infant (under one year of age): 21·4 per 1,000 births registered.

(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the Year 1898, in the Urban Sanitary District of BENWELL AND FENHAM: classified according to Diseases, Ages and Localities.

NAMES of LOCALITIES adopted for the purpose of these Statistics; public institutions being shown as separate localities.	Population at all Ages. Census 1891.	Estimated to middle of 1897.	Registered Births.	Aged under 5 or over 5.	New Cases of Sickness in each Locality, coming to the knowledge of the Medical Officer of Health. Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers. Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.	Measles.	
(a.)	(b.)	(c.)	(d.)	(e.)	1	2	3	4	5	6	7	8	9	10	11	12	13
Benwell and Fenham ...	10,500	13,000	545	Under 5 ...	0	15	1	0	0	0	0	0	0	0	3	36	0
				5 Upwards	0	34	1	0	0	4	0	0	0	0	15	55	0
Totals	10,500	13,000	545	Under 5 ...	0	15	1	0	0	0	0	0	0	0	3	36	0
				5 Upwards.	0	34	1	0	0	4	0	0	0	0	15	55	0

NAMES of LOCALITIES adopted for the purpose of these Statistics; public institutions being shown as separate localities.	Number of such Cases Removed from their Homes in the several Localities for Treatment in Isolation Hospital. Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Fevers. Typhus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.	Cholera.	Erysipelas.		
(a.)	1	2	3	4	5	6	7	8	9	10	11	12	13
Benwell and Fenham ...	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0
Totals	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0

Notification of Infectious Disease has been compulsory in the District since December 15th, 1889.
No Isolation Hospital provided.